Owners Manual

Öhlins Superbike Front Fork FG 670

ÖHLINS
ADVANCED SUSPENSION TECHNOLOGY

Safety signals

Important information concerning safety is distinguished in this manual by the following notations:

⚠

This Safety alert symbol means: Caution! Your safety is involved.

⚠ WARNING!

Failure to follow warning instructions could result in severe or fatal injury to anyone working with, inspecting or using the suspension, or to bystanders.

CAUTION!

Caution indicates that special precautions must be taken to avoid damage to the suspension.

NOTE!

This indicates information that is of importance with regard to procedures.

Introduction

All of Öhlins advanced suspension products are adapted to the brand and model. This means that length, travel spring action and damping characteristics, are tested individually just for the motorcycle that you have decided to fit with Öhlins suspension.

Before installation

Öhlins Racing AB can not be held responsible for any damage whatsoever to suspension or vehicle, or injury to persons, if the instructions for fitting and maintenance are not followed exactly. Similarly, the warranty will become null and void if the instructions are not adhered to.

⚠ WARNING!

1. Installing a suspension, that is not approved by the vehicle manufacturer, may affect the stability of your vehicle. Öhlins Racing AB cannot be held responsible for any personal injury or damage whatsoever that may occur after fitting the suspension. Contact an Öhlins dealer for advice.

2. Please study and make certain that you fully understand all the mounting instructions and the owner´s manuals before handling this suspension kit. If you have any questions regarding proper installation procedures, contact an Öhlins dealer or.

3. The vehicle service manual must be referred to when installing the Öhlins suspension.

NOTE!

Öhlins products are subject to continual improvement and development. Consequently, although these instructions include the most up-to-date information available at the time of printing, there may be minor differences between your suspension and this manual. Please consult your Öhlins dealer if you have any questions with regard to the contents of the manual.

NOTE!

During storage and transportation, especially at high ambient temperature, the oil and grease used for assembling may run out inside the packing and damage the expanded polystyrene packing material. This is not unusual and is in no way detrimental to the suspension.

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Öhlins Front Fork FG 670

This Super Bike front fork is an improved version of FG 570 with pressurised damping system. FG 670 is based on 6 years experience from factory road racing. The pressurised damping system improves the front fork function at high frequency movements. The immediate damping responses improve the tyre feeling and also give more possibilities for adjustments. Of course the combination of spring and air-gap (oil level*) still gives a possibility to adjust the characteristic of the fork to suit different tracks and riders.

For example a soft spring in combination with a small air-gap (high oil level) gives a more progressive action of the front forks.

NOTE!

Gas pressure should not be changed or used as an alternative to adjust the damping.

For better understanding, please refer to our oil level chart see page 17.

A telescopic front fork is depending on a smooth friction-free action. Make sure your front forks are serviced regularly and don't use strong solvents such as brake cleaner to clean the front forks. This will dry out the seals and cause friction.

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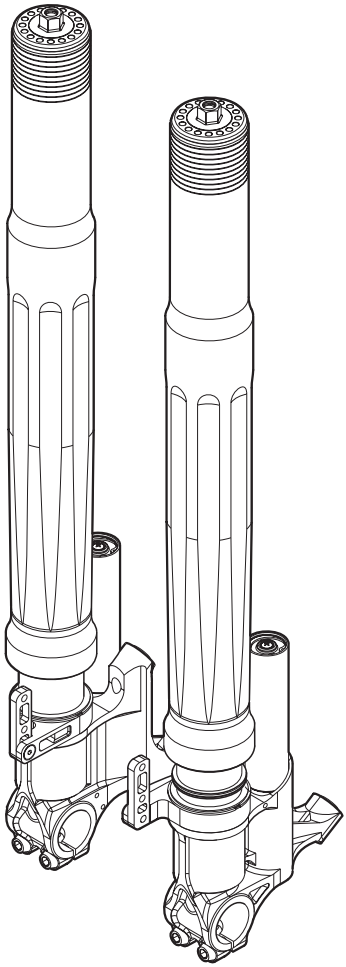


* *Front fork 670 is equipped with an external reservoir, pressurized with nitrogen. A dividing piston separates the oil from the gas.*

Adjusters

Your Öhlins super bike front fork is provided with the following external adjusters:

- Spring pre-load adjuster
- Rebound damping adjuster.
- Two type of compression damping adjuster:
  - Reservoir valve adjuster in the lower part of the fork leg.
  - Main valve bleed circuit.

NOTE!

The rebound damping adjuster is located at the top of the right hand fork leg. The Main valve bleed circuit (compression adjuster) is located at the top of the left hand fork leg.

Spring pre-load adjustment

Use a 14-mm wrench to turn the upper adjustment screw. The adjustment range is 0-18mm. On the adjustment screw one turn will change 1mm in spring pre-load. Recommended static sag is 25-30 mm.

Compression adjustment main valve.

Adjust the compression damping on the adjustment screw positioned at the top of the left hand fork leg. Use a hex key with spherical head (use tool 794-01).

Adjustment range from closed valve (clockwise) to maximum open valve (counter clockwise) is 20 “clicks”. Recommended adjustment “click”, from closed position: See specification card.

Rebound adjustment

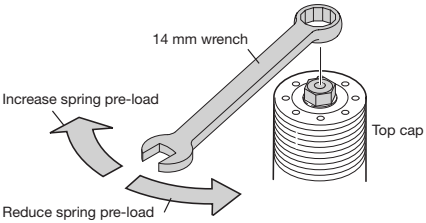
Adjust the rebound damping on the adjustment screw positioned at the top centre of the right hand fork leg. Use a hex key with a spherical head (use tool 794-01).

Adjustment range from closed valve (clockwise) until maximum open valve (counter clockwise) is 20 “clicks”. Recommended adjustment “click”, from closed position: See specification card.

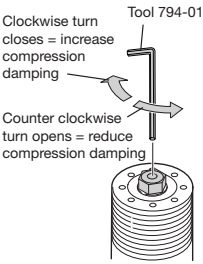
Compression adjustment reservoir valve (Base valve)

Adjust the compression damping (shaft displacement) on the lower part of the fork legs. Use a normal screwdriver. Adjustment range from closed valve (clockwise) to maximum open valve (counter clockwise) is 20 “clicks”. Recommended adjustment “clicks”, from closed position:
See specification card.

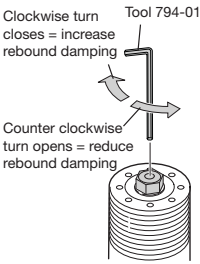
Spring pre-load adjustment



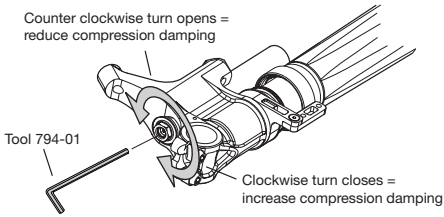
Compression adjustment Left Hand Fork Leg


Tool 794-01
Clockwise turn closes = increase compression damping
Counter clockwise turn opens = reduce compression damping

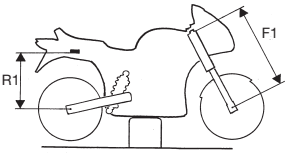
Rebound adjustment Right Hand Fork Leg



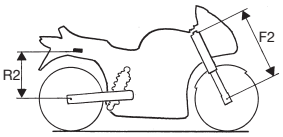
Compression adjusment reservoir valve (Base valve))


Counter clockwise turn opens = reduce compression damping
Tool 794-01
Clockwise turn closes = increase compression damping

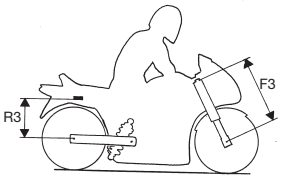
Setting up your forks



A-D. Bike on a stand



E. Bike on the ground



F. Bike with rider on

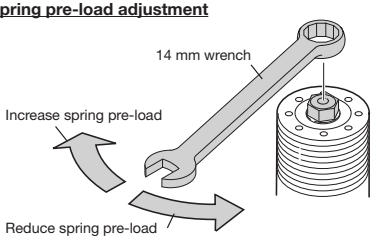
Here are some basic guidelines, how to set up your Öhlins front forks. However, you must remember that the front forks are just one part of your motorcycle and to get it to work properly, the whole motorcycle has to be set up according to your bikes manual.

1
Put your bike on a front stand and fit the Öhlins front fork.

NOTE!
The lower triple clamp must not be tightened to more than 12-15 Nm. This is also important for the steering damper bracket, when located around the upper front leg. To high torque might deform the front fork leg.

2
Set your initial pre-load of the spring, by using a 14mm socket or wrench, until you get a static sag of 25-30 mm. Each turn gives 1mm in pre-load, maximum pre-load is 18mm.

Spring pre-load adjustment



Setting the spring pre-load generally on the bike

3
Pre-load on the spring/springs is very important, since it affects the height of the motorcycle and the fork angle. Consequently, handling characteristics can be changed, even negatively.

Proceed as follows (it will be much easier if done by two persons):

1 Place the motorcycle on a stand.
2 Lift up the rear end to a fully extended upper position.
3 Measure the distance, e.g. from the ower edge of the rear mud guard or from a point marked by a piece of tape, immediately above the rear whee axle, to the wheel axle. (R1)
4 Make a similar measurement on the front axle, e.g. from the bottom of the upper fork crown to the front wheel axle. The fork must be fully extended. (F1)
5 Allow the motorcycle (without rider) to apply load on the springs and repeat the measuring procedure. (R2, F2)
6 Then take the same measurements with the rider and equipment on the motorcycle. It is important that the rider has a correct riding posture, so that the weight is balanced on the front and rear wheel in the same way as when riding. (R3, F3)

4
The measurements may not differ from the following sizes:

Without rider:
Rear: 10-20 mm (R1-R2)
Front: 20-30 mm (F1-F2)

With rider:
Rear: 25-40 mm (R1-R3)
Front: 35-50 mm (F1-F3)

Changing springs

1.
Unload the spring pre-load completely by turning the adjustment nut counter clockwise as far as possible. Use a 14 mm wrench or socket.

2.
Loosen the screws that hold the fork legs in the upper triple clamps.

3.
Remove the Top nut assembly. Use tool 797-01.

4.
Remove the top nut assembly from the piston shaft. Use a 14 mm wrench to the top and a 19 mm wrench to hold the nut on the lower side of the top nut.

5.
Remove the adjustment driver and the spring. Use a wire with a hook and carefully pull out the preload tube.

6.
Check the oil level according to page 17.

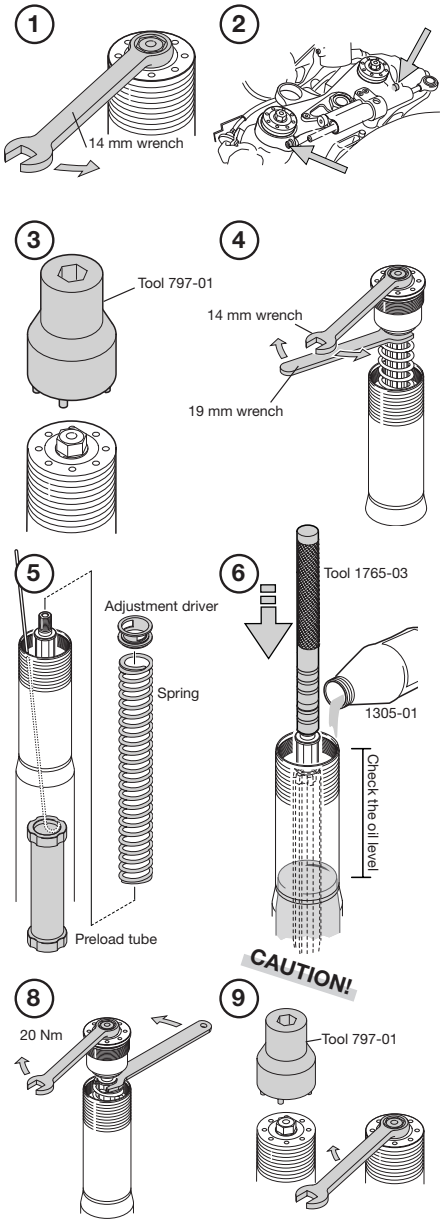
NOTE!
Use Öhlins Front fork oil 1311-01 only.

7.
Refit the Pre-load tube. Install the new spring and refit the adjustment driver.

8.
Refit the top nut assembly to the piston shaft. Tighten the jam nut to 20 Nm.

9.
Refit the top nut into the fork leg, with the front wheel off the ground (use tool 797-01). Tighten the upper triple clamps and adjust the preload, compression and rebound according to above instructions.

CAUTION!
The top nut should only be tightened by hand into the fork leg.



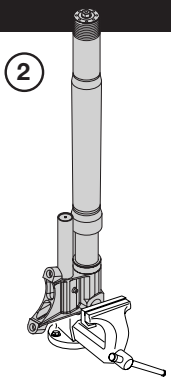
Changing seals

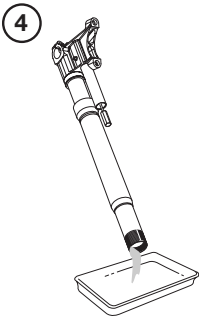
1.
Remove the fork legs from the motorcycle. Put the fork legs in upright position for about 5 minutes to allow the oil to settle.

2.
Fasten the fork leg in a vice. Use soft jaws.

3.
Carry out instructions 1 to 5 in “Changing springs”, page 6.

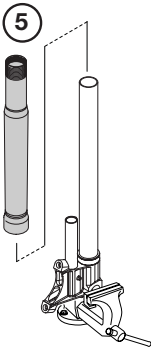
4.
Drain the cylinder tube from oil.

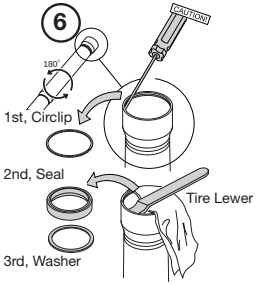




5.
Remove the outer tube, clean the seal and check the condition. If the seal is in good condition apply some red grease (146-01) to it. A damaged seal must be replaced!

6.
First remove the circlip, then the seal and finally the washer.





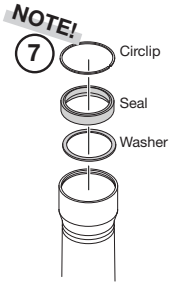
7.
Apply a thin layer of Öhlins red grease (146-01) to the washer and to the sealing surfaces of the fork seal. Install the seal and the washer in the outer tube. Fit the circlip into the groove.

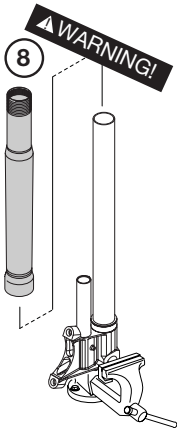
NOTE!
It is important to use the correct grease in order to achieve optimum fork function.

8.
Apply some front fork oil (1311-01) to the inner tube surface and carefully mount the outer tube (slide it completely down).

⚠ WARNING!
Be careful not to damage the fork seal!

9.
Repeat instructions 6 to 9 in “Changing springs” on page 6. Refit the front fork.





Dismantling the Forks

1.
Remove the fork legs from the motorcycle. Put the fork legs in upright position for about 5 minutes to allow the oil to settle.

2.
Fasten the fork leg in a vice. Use soft jaws.

3.
Unload the spring pre-load completely by turning the adjustment nut counter clockwise as far as possible. Use a 14 mm wrench or socket.

NOTE!
Do not use the pre-load adjuster to tighten or loosen the top-nut assy.

4.
Loosen the top nut assembly. Use tool 797-04.

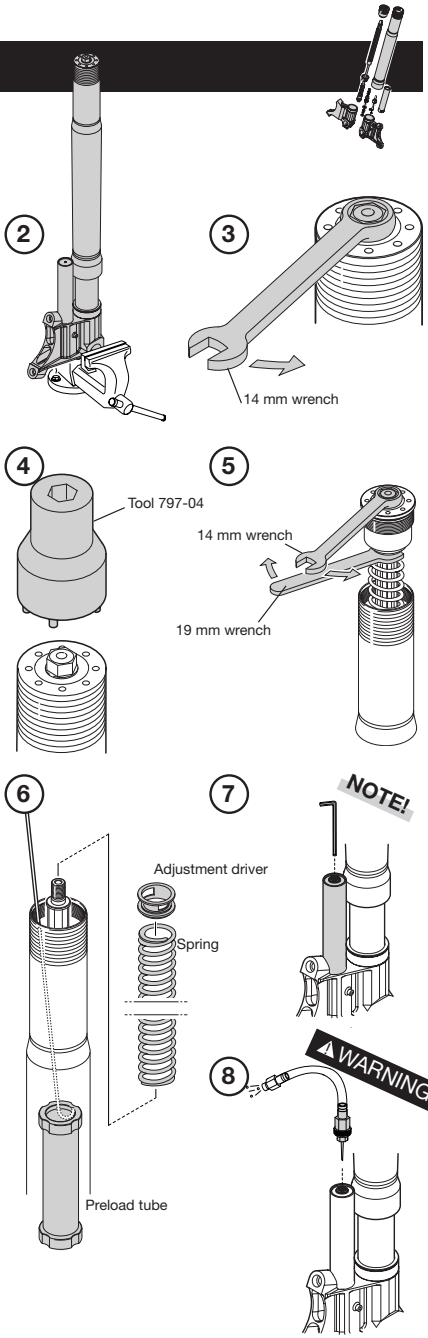
5.
Remove the top nut assembly from the piston shaft. Use a 14 mm wrench to the top and a 19 mm wrench to hold the nut on the lower side of the top nut.

6.
Remove the adjustment driver and the spring. Use a wire with a hook and carefully pull out the preload tube.

7.
Remove the screw and o-ring from the reservoir end cap.

NOTE!
Before the gas pressure is relieved the adjuster settings must be counted and noted. Even check that the gas pressure is correct. Follow that, the adjusters should be set in a fully open position.

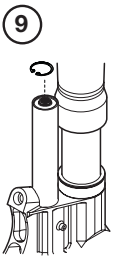
8.
Relieve the nitrogen gas by inserting an injection needle into the reservoir end cap through the rubber valve.



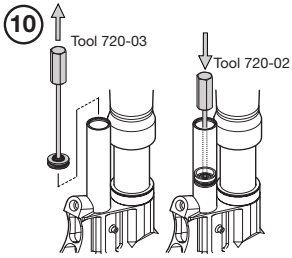
⚠WARNING!

Releasing high pressure gas from the front fork can be hazardous. Do not perform any kind of service until gas pressure is completely released.

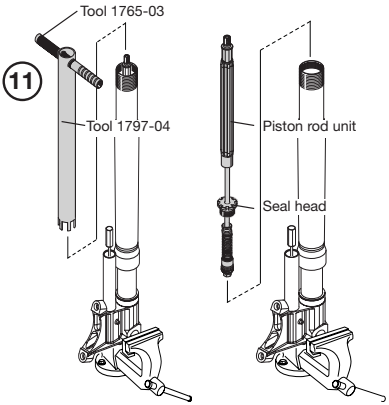
9.
Remove the circlip.



10.
Use tool 720-03 to lift up the reservoir end cap. Install the tool 720-02 into the gas piston.



11.
Use tool 1797-04 and 1765-03 to unscrew the seal head from the cartridge tube. Remove the piston rod unit.

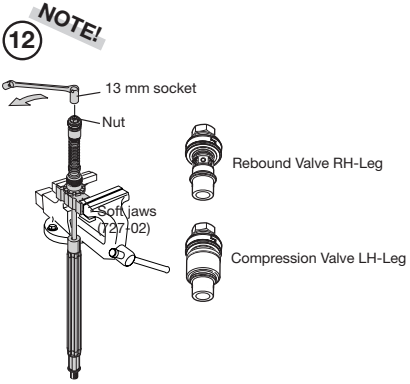


12.
Fasten the piston rod in a vice. Use soft jaws (727-02). Remove the nut with a 13 mm wrench or socket. Remove the valve from the piston rod.

Place all parts, including the shims, in their correct position on the work bench. Clean all parts thoroughly and dry with compressed air.

NOTE!

The right hand fork leg is the rebound leg. The left hand fork leg is the compression leg.



Notes

13.
Remove the Piston holder. Use a 22 mm wrench.

14.
Remove the Topout spring, the Sleeve, the Spacer and the O-ring.

15.
Remove the Seal head. Check the O-ring and the X-ring. Change them if necessary.

16.
Remove the needle and change the O-ring if necessary.

17.
Drain the cylinder tube from oil.

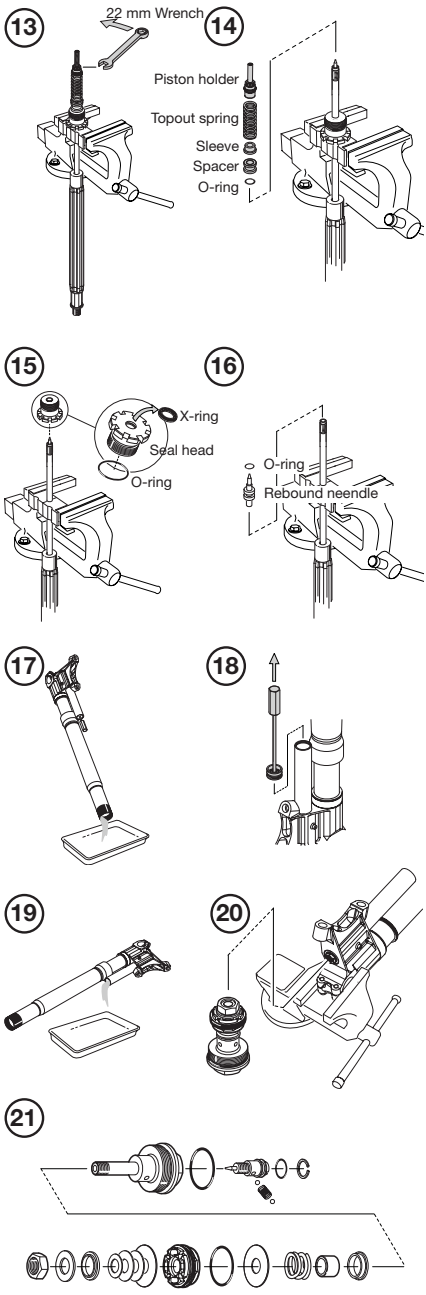
18.
Remove the gas piston in the reservoir, use tool 720-02.

19.
Drain the reservoir from oil.

20.
Use a 17 mm wrench to unscrew the complete compression valve at the bottom of the fork.

21.
Remove the piston from the compression valve. Place the shims in their correct position on the work bench. Clean all parts thoroughly, change O-rings if necessary and dry all parts with compressed air.

Notes



22.
Remove the outer tube, clean the seal and check the condition. If the seal is in good condition apply some red grease (146-01) to it. A damaged seal must be replaced!

23.
First remove the circlip, then the seal and finally the washer.

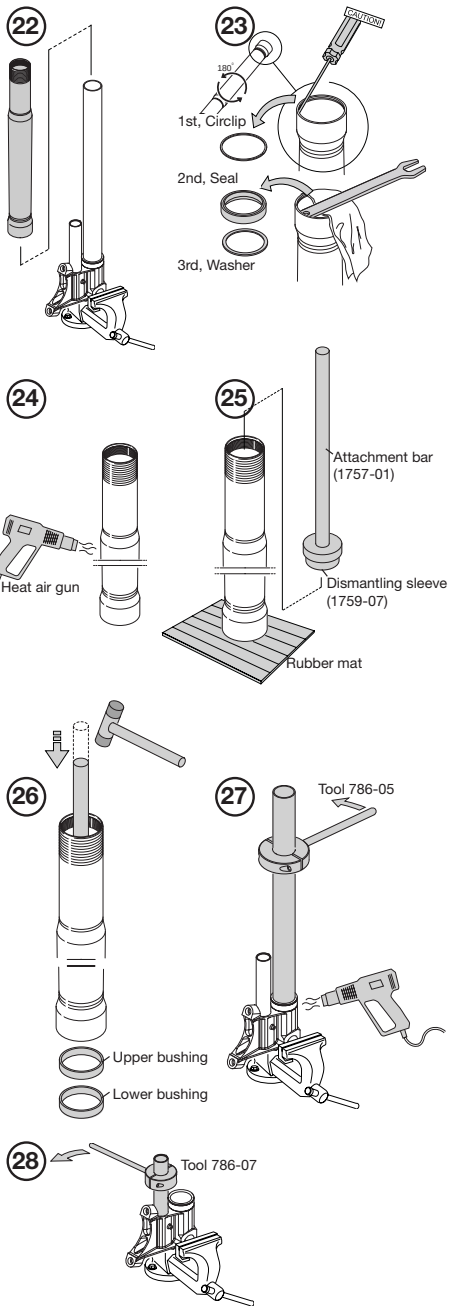
24.
Heat the tube where the bushings are positioned. Use a heat air gun.

25.
Put the outer tube standing up on a soft suface, seal side facing down. Remove the bushings by pushing them out. Use attachment bar (1757-01) and dismantling sleeve (1759-07) from the top nut side.

26.
Tap gently on the attachment bar with a heavy hammer, until the bushings are free and can be released from the seal side of the outer tube.

27.
Check the innertube for damages, replace if necessary. Use a heat gun to warm up the fork bottom and tool 786-05 to unscrew the inner tube of the fork leg.

28.
Check the reservoir tube for damages, replace if necessary. Use tool 786-07 to unscrew the reservoir tube.



Assembly of the forks

1.
Use Tool 786-07 to refit the reservoir tube. Tighten to 45 Nm.

2.
Use Tool 786-05 to refit the inner tube of the fork leg. Tighten to 80 Nm.

3.
Put the outer tube standing up on a soft surface, seal side up. Fit the bushings from the seal side of the outer leg. Install first the upper bushing then the lower one. Use installing sleeve (1759-08), guide ring (1758-04) and attachment bar (1757-01) when installing the upper bushing. Apply Loctite 601 on the seat position of the upper bushing, use a long brush. Tap the attachment bar until it reaches the correct position (stop against a shoulder).

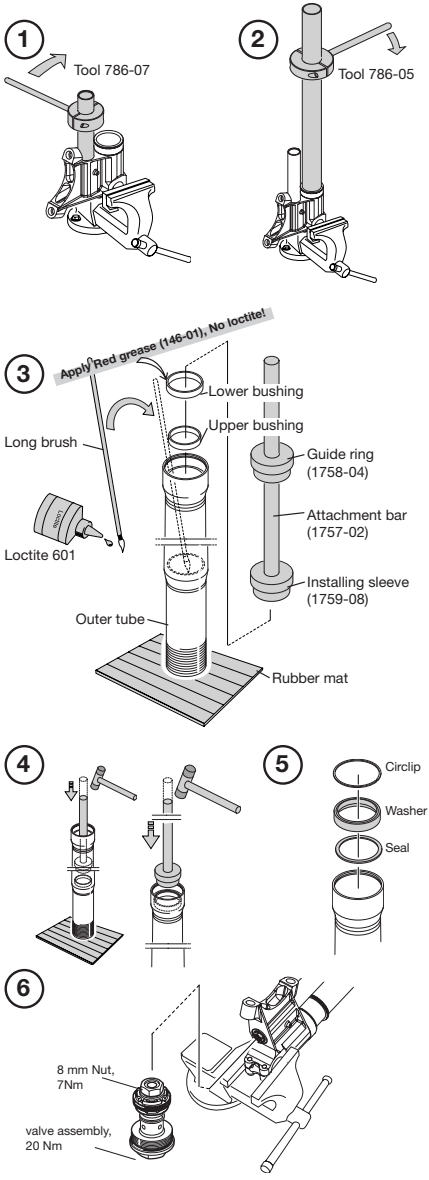
4.
When the upper bushing is in position, the lower bushing is to be installed the same way. Apply some red grease (146-01) to the bushing before installation.

5.
Apply a thin layer of Öhlins red grease (146-01) to the washer and to the sealing surfaces of the fork seal. Install the seal and the washer in the outer tube. Fit the circlip into the groove.

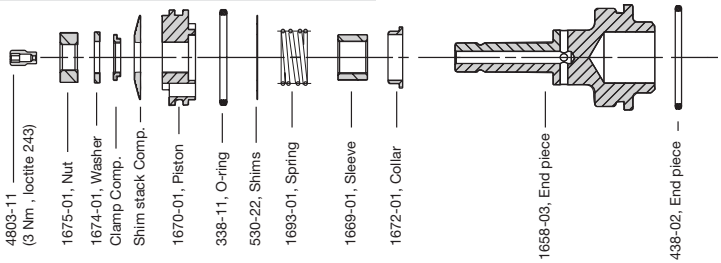
NOTE!
It is important to use the correct grease in order to achieve optimum fork function.

6.
Install the piston and the shims on the base valves. Tighten the 8 mm nut with a torque of 7 Nm. Check the piston ring and the O-rings for damages. Replace if necessary.

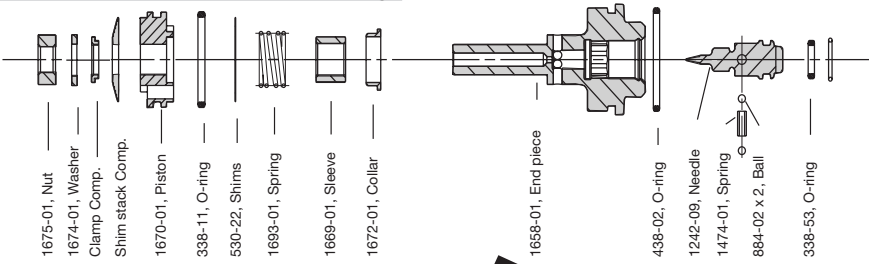
Install the base valve assembly into the valve housing. Tighten to 20 Nm.



Basevalve RIGHT side (rebound leg)

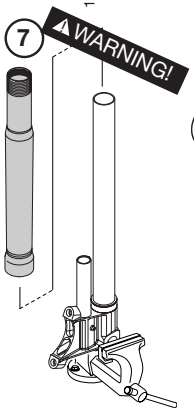


Basevalve LEFT side (compression leg)

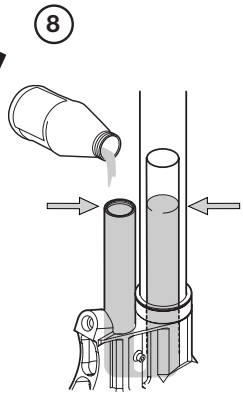


7.
Apply some front fork oil (1311-01) to the inner tube surface and carefully mount the outer tube (slide it completely down).

⚠ WARNING!
Be careful not to damage the fork seal!

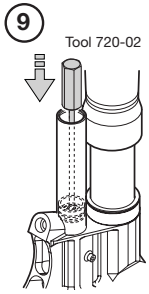


8.
Fill up with Öhlins front fork oil (1311-01) all the way to the edge of the reservoir. Continue to fill until the oil level is the same in both the reservoir and in the cylinder tube.



9.
Push the gas piston, with teflon band and O-ring fitted, to the reservoir bottom without allowing it to be pressed back over the circlip groove, make sure that there is no air between the piston and the oil. Use tool 720-02.

Close the compression adjuster.



10.
Grip the piston shaft with soft jaws 727-02. Fit the O-ring on the adjustment needle. Apply plenty of red grease on the O-ring so that the needle slides easily into the piston shaft.

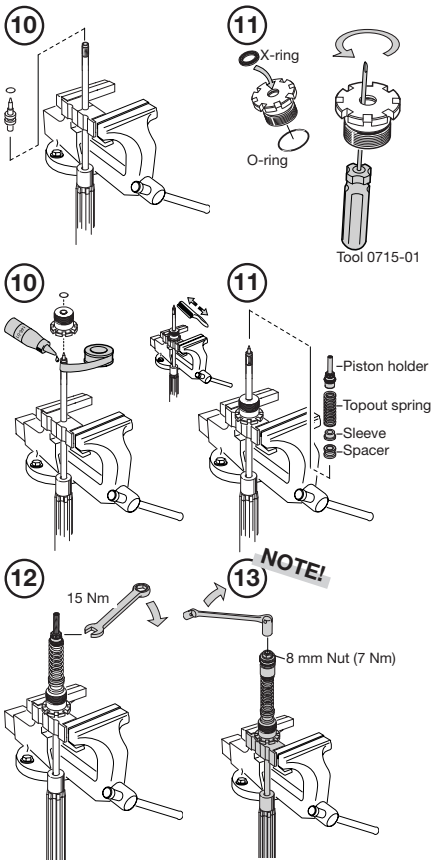
11.
Check the X-ring and O-ring on the seal head. Replace if necessary. Smear plenty of white grease on the X-ring before you fit it. Use tool 0715-01 to get the X-ring into the right position.

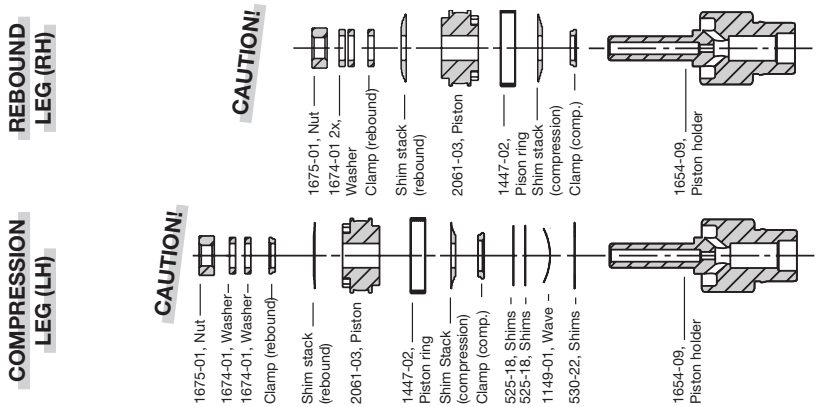
10.
Wrap some teflon tape arond the thread of the shaft to protect the seal and O-ring from damages. Apply some red grease (146-01) to the tape and the shaft end. Mount the seal head and the O-ring.

11.
Use a brass wire brush to clean the piston rod from tape. Mount Spacer, Sleeve, Top-out spring and the Piston holder.

12.
Tighten the Piston holder to a torque of 15 Nm.

13.
Refit the Compression/Rebound valve. Use the picture below to make it right. Tighten the 8 mm nut with a torque of 7 Nm.





CAUTION!

The Washers must be positioned correctly (Notice that there is a difference between the compression and the rebound valve). Also make sure to fit the Wave washer (1149-01) in the correct position (convex side facing piston).

NOTE!

The right hand fork leg is the rebound leg. The left hand fork leg is the compression leg.

14.

Fit the Seal head tool and the Top-out spring tool on the piston rod. Pull the Top-out spring tool and, at the same time, push the Seal head tool to contract the Top out spring. Install tool 2810-01 on tool 1765-03 to keep the contraction. Assemble the complete piston rod into the cartridge tube and tight it by hand (3-4 turns).

NOTE!

Make sure that the gas piston is pressed down completely

15.

Tighten the Seal head to 20 Nm. Use Seal head tool (1797-04 and 1765-03).

16.

Check the O-ring on the reservoir cap assy. Replace if necessary. Apply some red grease on the O-ring and push the reservoir cap assy into the chamber using tool 720-03.

17.

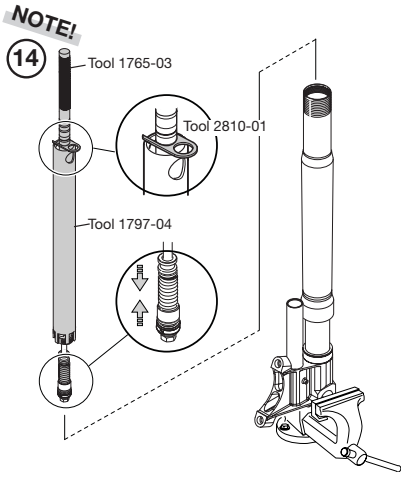
Fit the circlip. Make certain that it enters its groove properly.

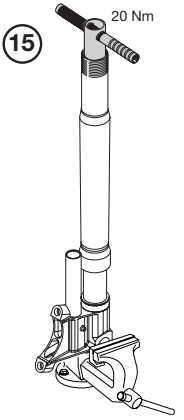
18.

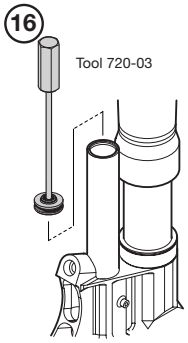
Once again contract the top out spring using tool 2810-01, tool 1765-03 and tool 1797-04

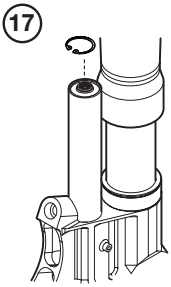
NOTE!

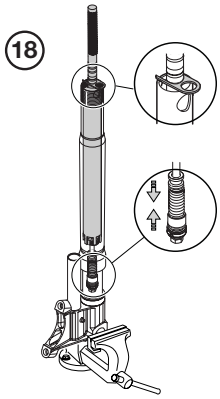
Nitrogen (N2) gas. Use pressure gauge (1781-01)











⚠ WARNING!

Use of inflammable gas for pressurising the soch absorber can be hazardous. ***Use nitrogen gas (N2) only!***

19.
Check the gas pressure stipulated in the spec. card. Dip the needle of the gas tool (1781-01) in red grease and insert the needle through the gas filler valve.

Charge with gas to the correct pressure, according to the spec. card.

NOTE!

Ensure that there is no leakage of gas or fluid.

20.
Screw the gas filler screw with O-ring. Remove tool 2810-01 and tool 1797-04 to release the top-out spring.

21.
Push tool 1765-03 to a stop and check the oil level according to page 17.

NOTE!

Use Öhlins Front fork oil 1311-01 only.

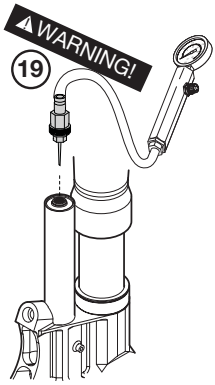
22.
Refit the Pre-load tube. Install the spring and refit the adjustment driver.

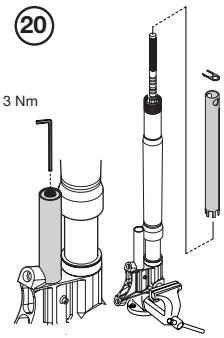
23
Refit the top nut assembly to the piston shaft. Tighten the jam nut to 20 Nm.

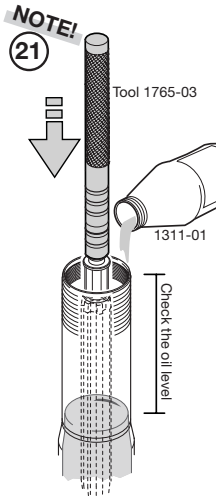
24.
Refit the top nut into the fork leg (use tool 797-01). Adjust the preload, compression and rebound.

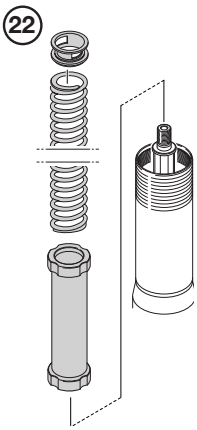
CAUTION!

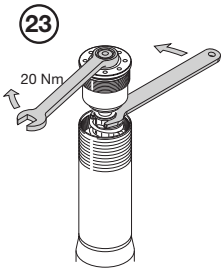
The top nut should only be tightened by hand into the fork leg. The tightening force of the triple clamp will hold it in locked position.

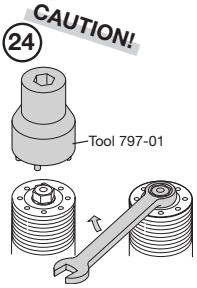












Oil level adjustment

Compared with conventional type of front forks, the upside down front forks are very sensitive to variations in oil level. Therefore, adjust the oil level with special care.

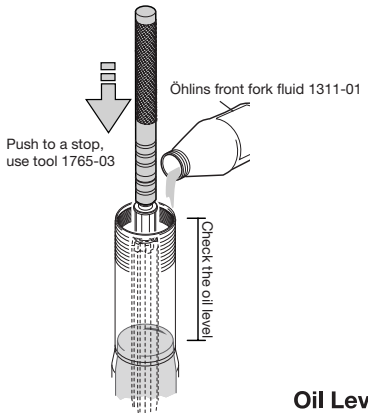
A change in the fork oil level will not affect the spring force at the beginning of the fork travel, but will have a great effect at the end of the travel.

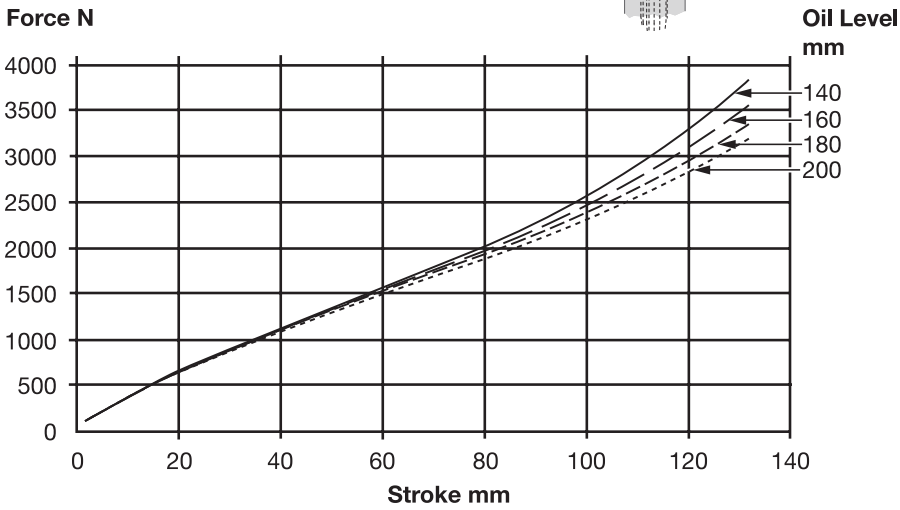
When the oil level is raised:
The air spring in the later half stage of travel is stronger, and make the front forks more progressive.

When the oil level is lowered:
The air spring of the travel is lessened, and thus the front fork less progressive. The oil level works most efficient at the end of the fork travel. Air spring characteristics shown, is a general card description to understand the difference when the oil level is changed.

NOTE!
Adjust the oil level in mm according to the figure with the fork leg fully compressed. For the right oil-level, please see the specification card.

Air spring characteristics
Air inside the front fork works as a spring. The graph at the bottom of the page shows the spring force related to stroke when the oil level is changed between 140 mm and 200 mm. Standard oil level is 180 mm.





Troubleshooting

Below are a few examples of how to adjust for the most common road holding problems in Road Racing driving.

1.
The front wheel “chatters” entering a corner, the problem goes away, as soon as you let the brakes off, or when you get on the power.

- This is caused by the fact that the fork is working too low in the travel and reaches the progressive, hard part at the end of the travel.
- Put on more pre-load.
- Change to a harder spring.
- If a lot of stroke remains after riding, drop the oil level. See oil level chart.
- Make sure the front forks have no friction.
- Rear ride height is to high, too much rear spring pre-load.
- Lower the rear end by taking off pre-loadfrom rear shock spring.

2.
The front wheel is jumping during the last part of braking.

- If a lot of stroke remains, the oil level is too high. Lower the oil level.
- If the fork is bottoming, put in harder springs and keep the oil level.

3.
The front end feels unpredictable and unsafe in the middle of the corner (between braking and getting on power).

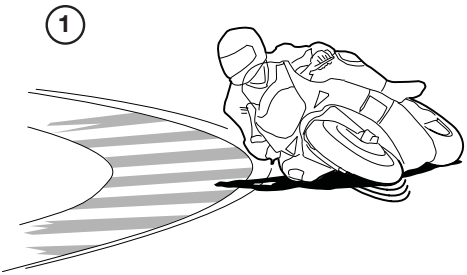
- Not enough rebound damping. Put on more damping.
- Too much rebound damping. If it at the same time feels harsh, take off some rebound damping.
- Too much compression damping. Also gives a harsh feeling. Take off some compression damping.

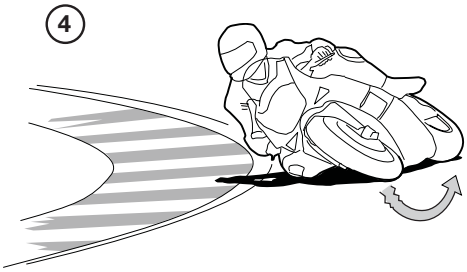
4.
The front end loses grip coming out of a corner.

- Not enough rebound damping. Put on some more rebound damping.
- Too much pre-load. Take off some pre-load.
- Rear end is too soft. Put on a harder rear spring.
- Front end is too high. Lower the front end by pulling the fork legs through the triple clamps.

As mentioned in the beginning, the whole bike setup affects the front forks. Try to understand the feelings and work step by step.

NOTE!
Our advice is to change only one thing at a time and do everything step by step.





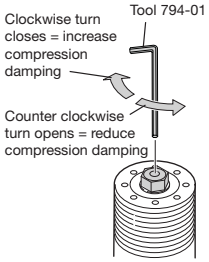
Guidelines

The settings on this pressurised Front Fork are based on what currently is being used in Moto GP racing, furthermore the delivery spec is something we like to refer to as a “balanced setting”. This means that the pressure drop over the bottom valves (base valves) and the top pistons (ø25mm) are matched.

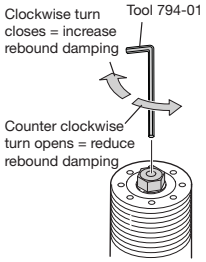
In order to avoid an unnecessary high internal pressure or risk of cavitation, please use the following guide lines when adjusting the front fork.

The FG 670 front fork can be divided into two parts. One being the so-called rebound leg (right leg), and one the compression leg (left leg).

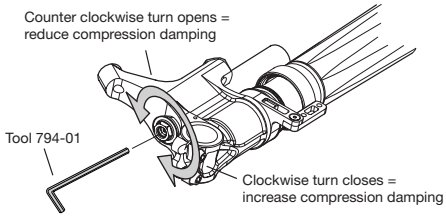
Compression adjustment Left Hand Fork Leg


Tool 794-01
Clockwise turn closes = increase compression damping
Counter clockwise turn opens = reduce compression damping

Rebound adjustment Right Hand Fork Leg



Compression adjusment reservoir valve (Base valve))


Counter clockwise turn opens = reduce compression damping
Tool 794-01
Clockwise turn closes = increase compression damping

Start click position in this example:
Rebound (Top right) = 10 clicks open,
Rebound base (bottom right) = 16, never adjust
Compression (top left) = 12
Compression base (bottom left) = 12

Rebound damping adjustment.
The rebound damping is adjusted on the top of the right leg. Standard click position is 10 clicks open from fully closed position. The recommended range of adjustment with this setting is 6-16 clicks open from fully closed position.

Compression damping adjustment.
As said earlier the compression damping on this Front fork (FG 570) has been checked for balance at the factory before delivery. In order not to change this matched pressure balance between the 25mm valves (main piston) and the base valves (bottom left and right leg), please use the following guidelines.

By changing both the top and bottom compression adjusters at the same time you have a greater chance of keeping the pressure balance between these adjusters more constant.

For individual adjustments, see next page.

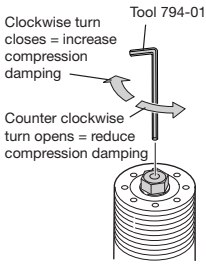
Individual adjustments

Individual adjustments
Below you can find the recommended adjustment range for the top left compression leg adjuster, with different positions on the bottom base valve. From soft to hard:

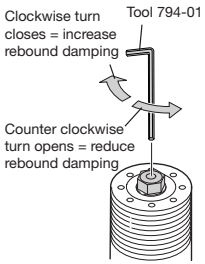
Base 19 clicks, top 17-20 clicks
Base 16 clicks, top 14-18 clicks
Base 12 clicks, top 11-14 clicks
Base 10 clicks, top 10-12 clicks

Base valve:
The left bottom base valve can be adjusted from 8- 13 clicks, if top compression is set at 12 clicks open.

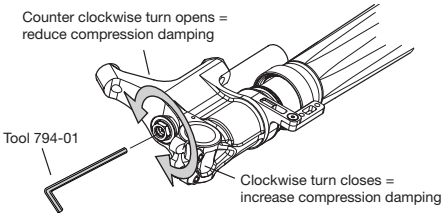
Compression adjustment Left Hand Fork Leg


Tool 794-01
Clockwise turn closes = increase compression damping
Counter clockwise turn opens = reduce compression damping

Rebound adjustment Right Hand Fork Leg



Compression adjusment reservoir valve (Base valve))


Counter clockwise turn opens = reduce compression damping
Tool 794-01
Clockwise turn closes = increase compression damping

Other tips and tricks
For on track adjustments and satisfying your riders needs we could also look at the adjuster from this angle:

1.
The compression damping from your left base valve can be adjusted when you need more compression damping, but you don't want the damping to react too quick! Let's say the rider needs more damping during braking, then close the bottom adjuster 1-3 clicks since this adjustment will have time to react during braking, but will allow the front fork to go smoothly over bumps at hard cornering.

2.
If the rider complains about lack of "tire feel" you can improve this by closing the top left compression adjuster (2-3 clicks) since these adjustments will give a quicker response. This could also improve the rider's initial dive of the front fork when he is applying the front brake NB! By closing this adjuster too much, can also remove some comfort and make the fork feel hard and harsh.

Should the above instructions not be enough or the standard setting somehow not meeting the needs for you riders, then please contact Öhlins racing AB Sweden for setting information rather than attempting to modify the setting yourself. We have a vast setting bank for this front fork with balanced and matched settings to choose from.

Notes

Technical information

Fork length: 730 mm.
Stroke: 130 mm.
Free spring length: 260 mm.

Rebound adjustment:
Base setting 9-12 “clicks”.
Maximum open valve 20 “clicks”.

Compression adjustment:
Base setting 6-16 “clicks”.
Maximum open valve 20 “clicks”.

Compression adjustment (Base valve):
Base setting 6-16 “clicks”.
Maximum open valve 20 “clicks”.

Spring pre-load adjustment:
0-18 mm (0-18 turns).

Spring rate:
4744-95 9.5 N/mm (marking -95).

Optional springs supplied:
4744-10 10.0 N/mm (marking -10)
4744-90 9.0 N/mm (marking -90)

Optional springs:
4744-85 8.5 N/mm (marking -85)
4744-80 8.0 N/mm (marking -80)

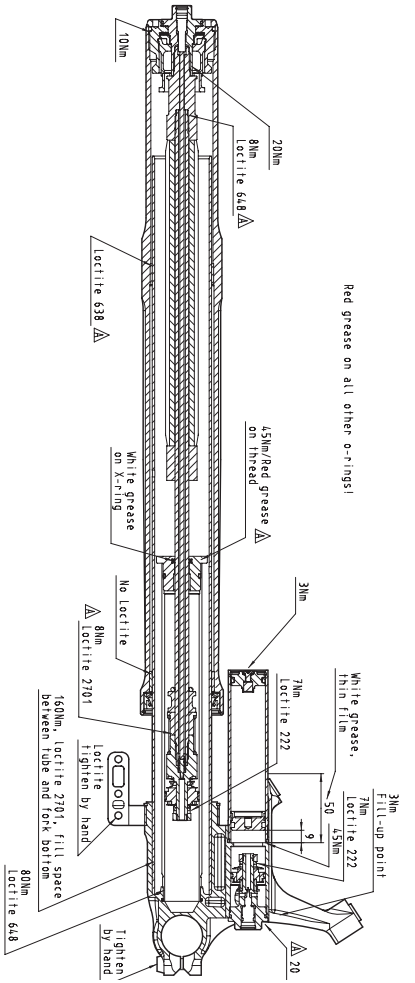
Oil Capacity:
Please see specification card.
Use Öhlins high performance front fork fluid No. 5 (1311-01) only.

Tighten torque:
Lower triple clamp bolt 12-15 Nm.
Upper triple clamp bolt 18-22 Nm

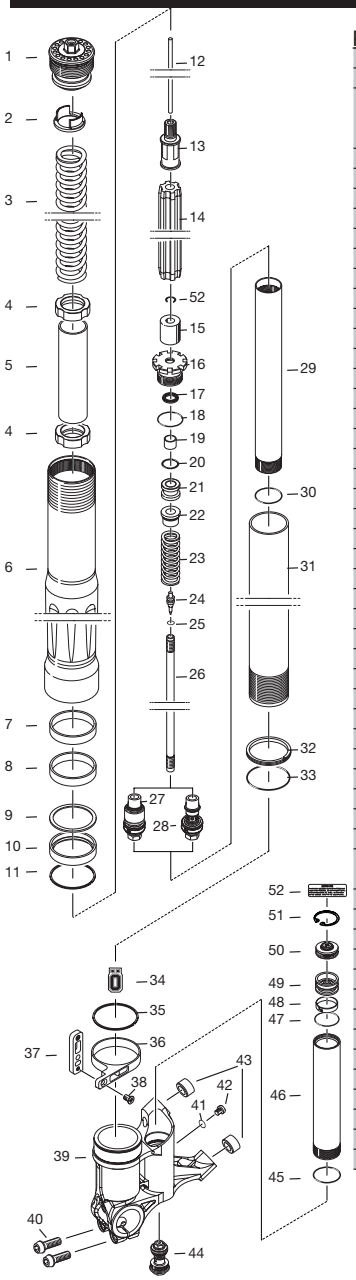
Grease:
Öhlins front fork grease 146-01 (red grease).

Service interval:
Every 10 hours

Tighten torque, Loctite and Grease:

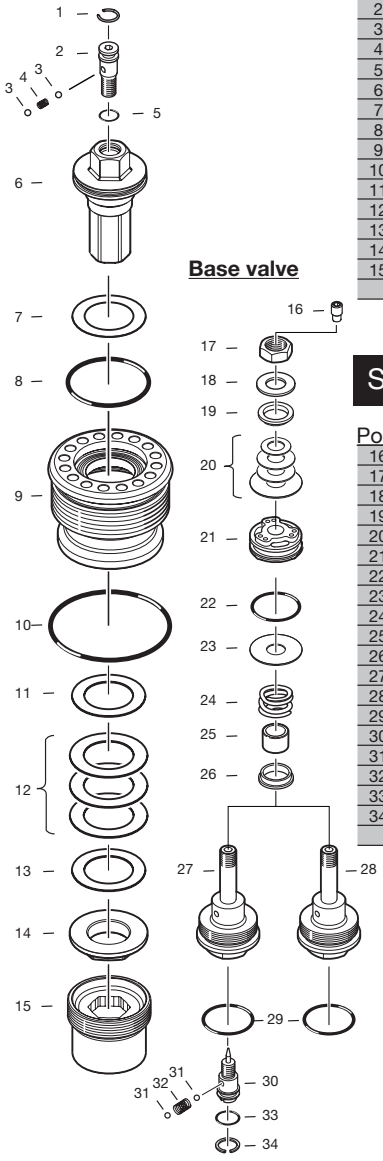


Spare parts list, FG 670



Pos.	Part No.	Pcs.	Description	Type/remarks
1	04732-05	2	Top nut assembly	See page 24
2	01408-04	2	Adjustment driver	
3	04744-95	2	Spring	25.5/260/9.5
	04744-10	2	Option spring	25.5/260/10.0
	04744-90	2	Option spring	25.5/260/9.0
4	01438-04	4	Guide ring	
5	01460-46	2	Preload tube	
6	01900-06	2	Fork leg outer	
7	01683-02	2	Bushing, upper	
8	01684-02	2	Bushing, lower	
9	04758-01	2	Washer	
10	04720-02	2	Seal	
11	04759-01	2	Circlip	
12	02807-01	2	Adjustment rod	
13	01901-04	2	Rod extensioner	
14	02302-08	2	Guide sleeve	
15	01440-01	2	Bump rubber	
16	01651-04	2	Seal head	
17	01027-04	2	X-ring	
18	00438-02	2	O-ring	
19	01056-04	2	Bushing	
20	00438-41	2	O-ring	
21	02803-01	2	Spacer	
22	01653-05	2	Sleeve	
23	04718-04	2	Topout spring	
24	01698-30	2	Rebound needle	
25	00338-14	2	O-ring	
26	02368-01	2	Shaft	
27	-	1	Compression valve (LH)	See page 25
28	-	1	Rebound valve (RH)	See page 25
29	01656-02	2	Cylinder tube	
30	00338-72	2	O-ring	
31	01700-01	2	Fork leg inner	
32	01565-04	1	Stroke indicator	
33	00338-63	1	O-ring	
34	00191-17	2	Sticker “Ö”	
35	04759-02	2	Circlip	
36	01682-28	2	Fender bracket ring	
37	01678-14	2	Fender bracket	
38	00382-08	2	Screw	
39	01902-13	1	Fork bottom	Left
	01902-14	1	Fork bottom	Right
40	01240-08	4	Bolt	Titan
41	00438-33	2	O-ring	
42	00382-07	2	Screw	
43	01669-02	4	Caliper sleeve	
44	-	2	Base valve	See page 24
45	00338-72	2	O-ring	
46	02804-01	2	Reservoir tube	
47	00338-25	2	O-ring	
48	01447-02	2	Piston ring	
49	02806-01	2	Gas piston	
50	00161-08	2	Reservoir end kit	
51	01152-01	2	Circlip	
52	00196-01	2	Sticker “Warning”	

Top nut assy



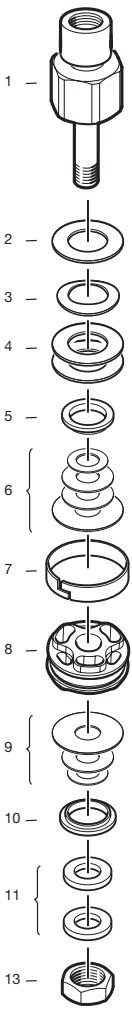
Spare parts list, Top nut assey

Pos.	Part No.	Pcs.	Description	Type/remarks
1	01473-01	2	Circlip	
2	01467-03	2	Needle	
3	00884-04	4	Ball	
4	01474-01	2	Spring	
5	00577-01	2	O-ring	
6	03312-01	2	Adjuster	
7	03309-01	2	Thin Shim	
8	00338-72	2	O-ring	
9	03318-05	2	Housing	
10	00338-02	2	O-ring	
11	03309-01	2	Thin Shim	
12	03317-01	6	Wave washer	
13	03309-02	2	Thick shim	
14	03313-01	2	Nut	
15	03315-01	2	Preload socket	

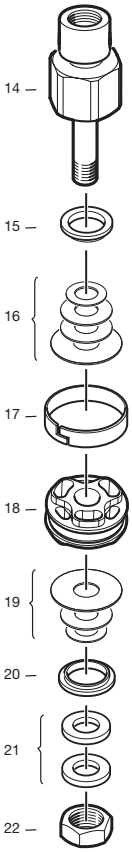
Spare parts list, Base valve

Pos.	Part No.	Pcs.	Description	Type/remarks
16	04803-11	1	Jet (RH)	Rebound leg
17	01675-01	2	Nut	
18	01674-01	2	Washer	
19	-	2	Clamp compression	See spec. card
20	-	-	Shim stack	See spec. card
21	01670-01	2	Piston compression	
22	00338-11	2	O-ring	
23	00530-22	2	Shims	
24	01693-01	2	Spring	
25	01669-01	2	Sleeve	
26	01672-01	2	Spring collar	
27	01658-01	1	End piece (LH)	Comp. leg
28	01658-03	1	End piece (RH)	Rebound leg
29	00438-02	2	O-ring	
30	01242-09	1	Adjustment needle (LH)	Comp. leg
31	00884-02	2	Ball (LH)	Comp. leg
32	01474-01	1	Spring (LH)	Comp. leg
33	00338-53	1	O-ring (LH)	Comp. leg
34	01473-02	1	Circlip(LH)	Comp. leg

Compression valve



Rebound valve



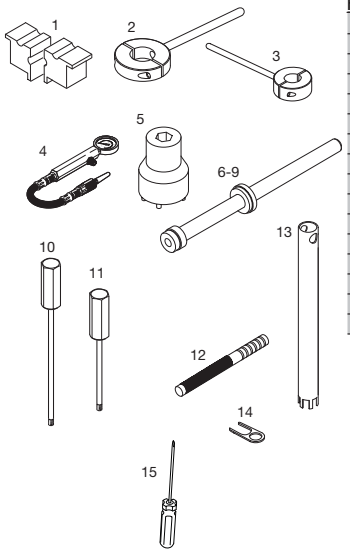
Spare parts list, Compression valve (LH)

Pos.	Part No.	Pcs.	Description	Type/remarks
1	01654-09	1	Piston holder	
2	00530-22	1	Shims	
3	01149-01	1	Wave washer	
4	00525-18	2	Shims	
5	-	1	Washer	See spec. card
6	-	-	Shim stack (comp.)	See spec. card
7	01447-02	1	Piston ring	
8	02061-03	1	Piston	
9	-	-	Shim stack (reb.)	
10	-	1	Washer	See spec. card
11	01674-01	2	Washer	
13	01675-01	1	Nut	

Spare parts list, Rebound valve (RH)

Pos.	Part No.	Pcs.	Description	Type/remarks
14	01654-09	1	Piston holder	
15	-	1	Washer	See spec. card
16	-	-	Shim stack (comp.)	See spec. card
17	01447-02	1	Piston ring	
18	02061-03	1	Piston	
19	-	-	Shim stack (reb.)	See spec. card
20	-	1	Washer (reb.)	See spec. card
21	01674-01	2	Washer	
22	01675-01	1	Nut	

Service tools



Pos.	Part No.	Pcs.	Description
1	00727-02	1	Soft jaws (one pair)
2	00786-05	1	Inner tube tool
3	00786-07	1	Cartridge tube tool
4	01781-01	1	Gas tool
5	00797-01	1	Top nut socket
6	01757-01	1	Attachment bar
7	01759-07	1	Dismantling bar
8	01759-08	1	Installing sleeve
9	01758-04	1	Guide ring
10	00720-02	1	Measure pin
11	00720-03	1	Pin tool
12	01765-03	1	Pull-up spring tool
13	01797-04	1	Seal head tool
14	02810-01	1	Pull-up spring tool holder
15	00715-01	1	Screwdriver

Notes

More info

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Öhlins Racing AB, Box 722, S-194 27 Upplands Väsby, Sweden
Phone +46 8 590 025 00, Fax +46 8 590 025 80

07280-12D, Issued 06 07 26. Öhlins Racing AB, Mattias Johansson, majo/ Update: Tiina Harakka